ABSTRACT

Effect of adaptive replanning on ORGAN AT RISK doses at 40 Gy in head and neck cancers.

Aim:

To evaluate the dose volume histogram datas in patients diagnosed as stage III/IV cancer in the Nasopharynx /Oropharynx /Hypopharynx. All patients are treated with IMRT using planning CT images and evaluated with CBCT images during the course of treatment.

Materials and methods :

This is a prospective study of DOSIMETRIC analysis done at our institute between March 2017 to August 2017.We evaluate the TCP and NTCP datas calculated based on equivalent uniform dose(EUD). Cone beam CT images are taken for patients at 40Gy and organ at risk (OAR) such as spinal cord, brainstorm, parotid gland, mandible are contoured by the same radiation oncologist on the CBCT image set and deformed to initial planning CT. DVH generated for these structures from initial clinical plan was evaluated - NTCP and TCP are calculated.

Description :

In this study we have evaluated that the mean average parotid volume dose received has increased by 10%. The Median dose increase by 7 %.

Conclusion :

In this study we observed a significant increase in NTCP if the same clinical plan continued beyond 40Gy.